The Future of Primary Care in Rural and Underserved Areas- Addressing the Needs through Residency Training Programs and Policy Changes

By

Maureen Hubbard

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Approved by:

_____
Susan A. Randolph, Advisor

_____
Brett Waress, Reader

Abstract

The health of the United States' (U.S.) population continues to lag behind other industrialized countries when comparing key global health indicators. However, the U.S. leads all industrialized nations in total expenditures on health as a percentage of gross domestic product (GDP). Health expenditures are predicted to continue to climb while disparities in health status and health outcomes exist within many subpopulations in the U.S., including those who are residents in rural and underserved areas. The inequalities in health coverage and health access particularly in Medically Underserved Areas (MUAs) and Health Professional Shortage Areas (HPSAs) must be addressed to decrease health disparities among this population group.

The Patient Protection and Affordable Care Act (PPACA) signed into law on March 23, 2010 by President Barack Obama will shape the future of health care and influence the need for primary care clinicians in rural and underserved areas. While primary care improves continuity of care, increases quality of care and decreases medical errors leading to better health outcomes, medical residents are choosing subspecialty training rather than primary care, leading to a shortage of primary care providers in rural and underserved areas. Rural and underserved areas are places that need primary care providers to decrease the inequalities in health access and health disparities felt by population groups living in these areas (Nelson, Pomerantz, Howard & Bushy, 2007).

Policy change is essential to increase the primary care workforce in rural and underserved. Medical residents need to train in rural and underserved areas during their medical rotations. Incentives to practice in primary care should be increased so medical residents will select primary care over the more lucrative subspecialties. Reimbursement rates for primary care practices need to be increased. In addition, the availability of scholarship and loan repayment

programs should be expanded for medical students choosing primary care. A commitment to these changes is necessary to address the need for primary care providers in the future and ultimately improve the health of the nation.

Keywords: Health care reform, Primary care, residents training programs

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Chapter I

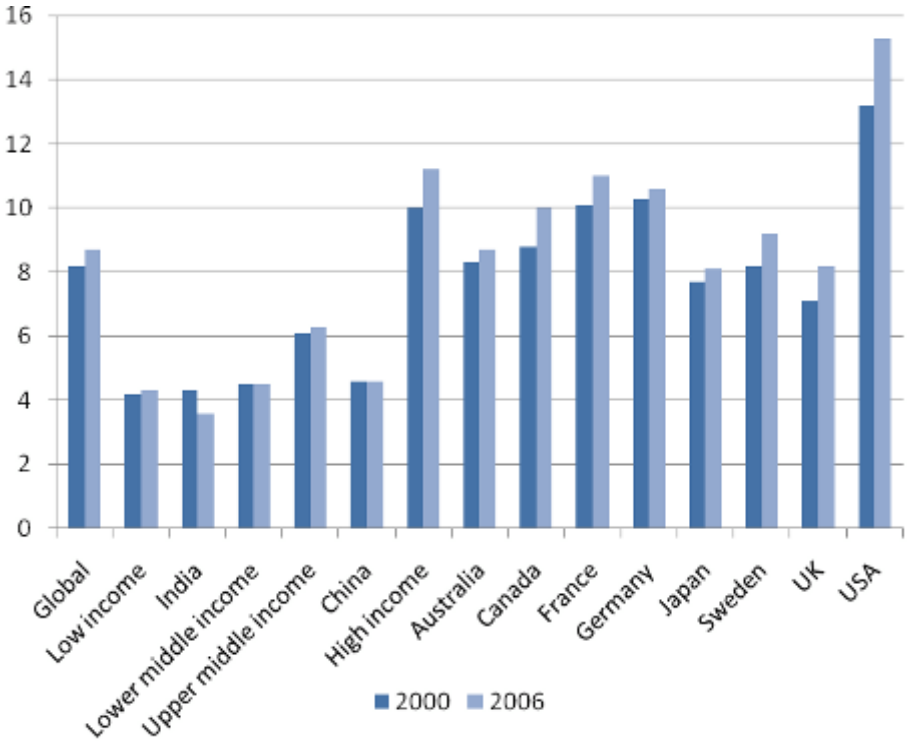
Introduction

The health of the U.S. population continues to lag behind other industrialized countries. When comparing the U.S. health system's performance with other industrialized counties for ensuring health of their populations, the U.S. continues to be out performed (Murray & Frenk, 2010). The U.S. ranks near the bottom in key global health indicators including overweight and obesity, child mortality, deaths from cancer, tobacco consumption, life expectancy, and suicides rates (World Health Organization [WHO], 2010). However, the U.S. leads all industrialized countries in total expenditures on health as a percentage of gross domestic product (GDP). The WHO Health Statistics (2010) show the U.S. is not only spending a higher percentage of GDP than any other industrialized country, but the percentage of GDP expenditures is increasing at a faster rate compared to other industrialized countries (Figure 1.1).

Although the U.S. spends more money on health care than other industrialized countries, the rural population in the U.S. is being affected disproportionately in comparison to urban areas when assessing heath disparities (Nelson et al., 2007). The National Institutes of Health (NIH) defines health disparities as "the difference in the incidence, prevalence, morbidity, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups" (NIH, 2010, ¶1). The rural population is more likely to have chronic health problems and poorer health status than their urban counterparts which leads to these health disparities (Nelson et al., 2007). The rural population is also underserved; its burden of disease and disability is substantial which puts demands on an already resource-poor care system (Nelson et al., 2007).

Figure 1.1

Total Health Spending as Percent of GDP in Selected Counties and Country Groups

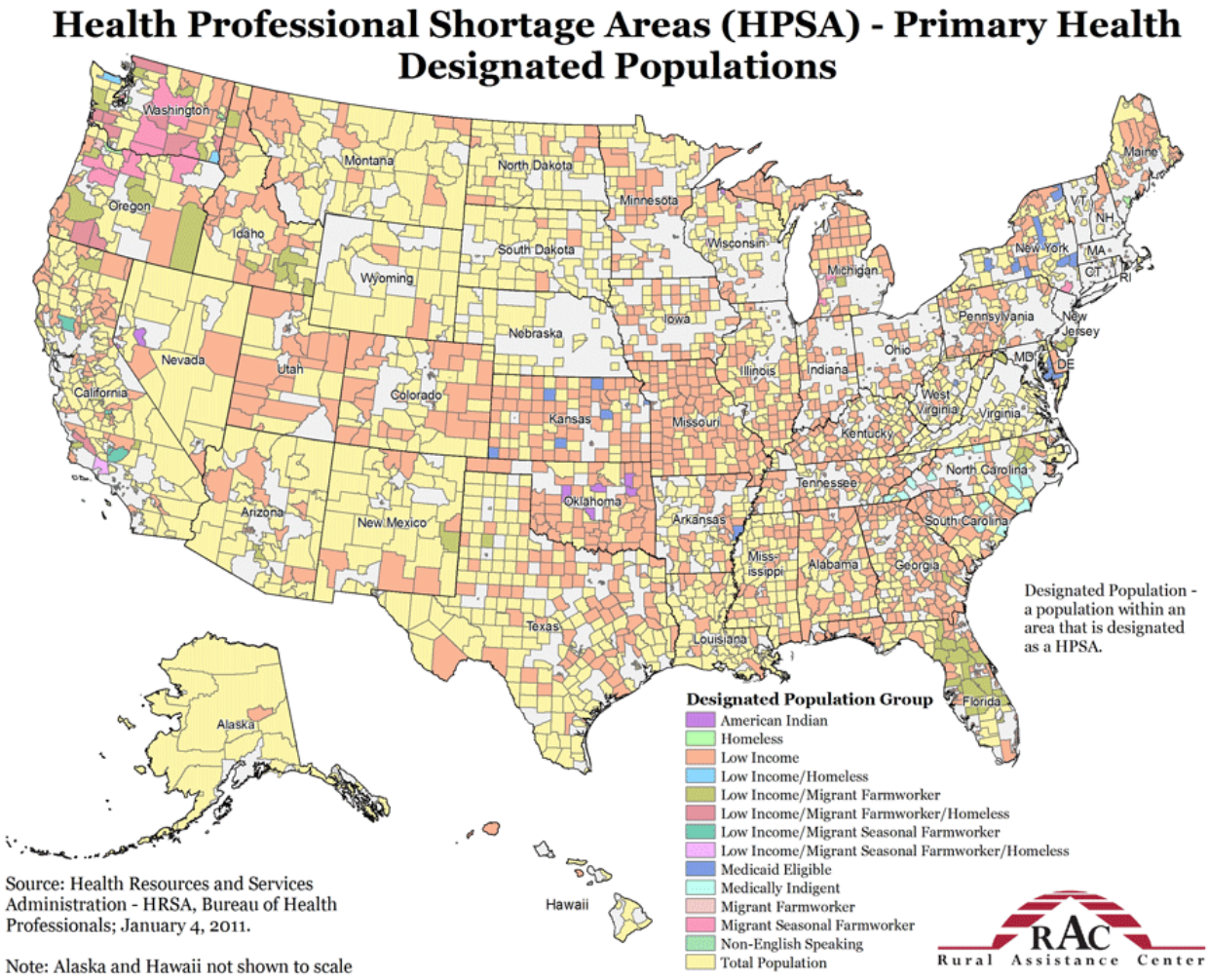


Source: WHO (2009) as cited in Shah (2009)

The rural and underserved populations not only experience inequalities in health disparities but also in health access and health coverage. The Health Resources and Services Administration (HRSA) within the U.S. Department of Health and Human Services (DHHS) developed shortage designation criteria to identify Health Professional Shortage Areas (HPSAs) or Medically Underserved Areas (MUAs) (Figure 1.2 and Figure 1.3). "HPSAs may be designated as having a shortage of primary medical care, dental or mental health providers" (HRSA, 2010, ¶2). As of 2009, 65 million people live in 6,204 Primary Care HPSAs, and it is estimated that the U.S. needs nearly 16,643 primary care providers to fill the shortages in areas designated as HPSAs (HRSA, 2010). When comparing the National Association of Community Health Centers State-by-State Community Health Data (Table 1.1), about 36 million people are estimated to be without access to a primary care physician in the U.S. and annual wasted expenditures on avoidable emergency room visits are over 18 billion dollars.

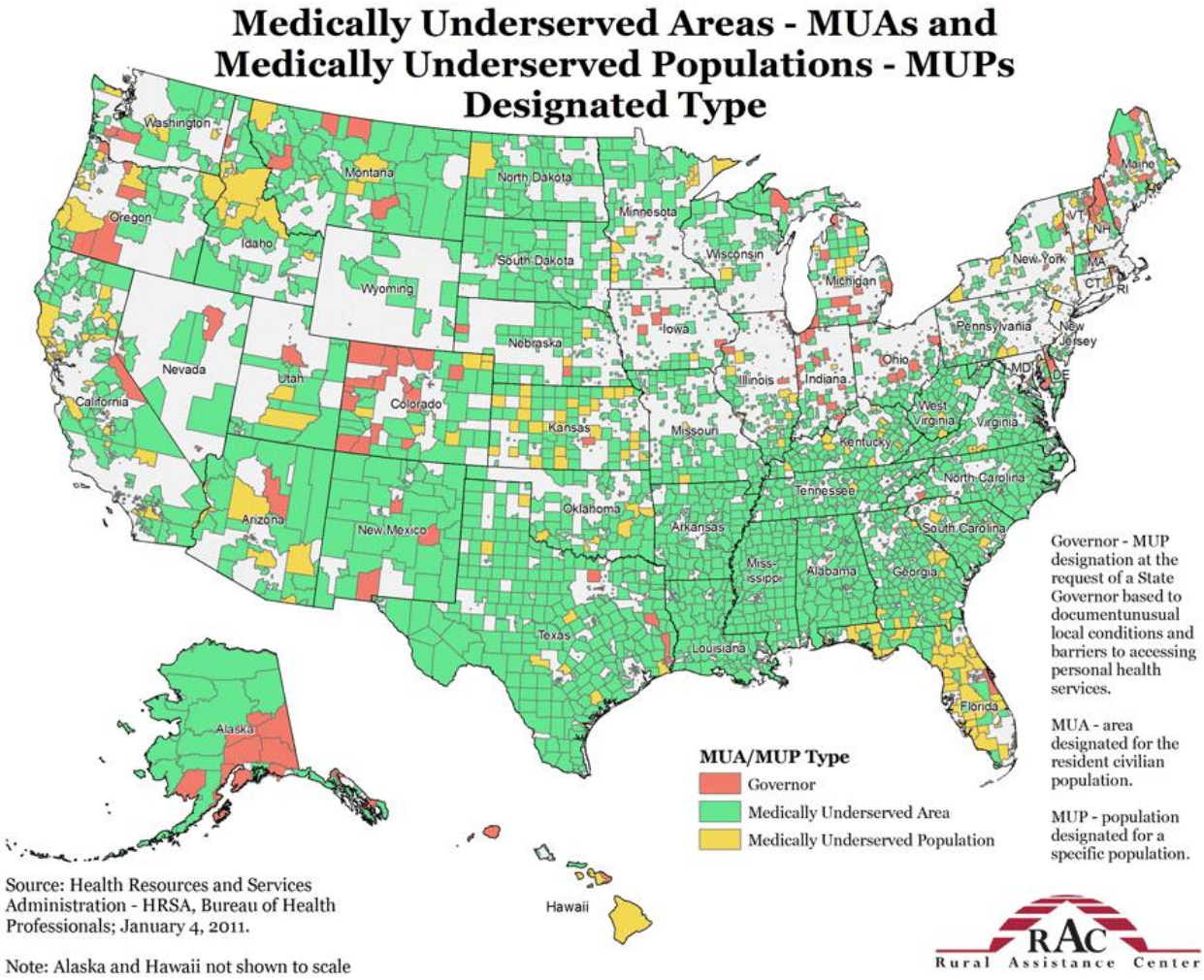
The HRSA designates a Medically Underserved Area (MUA**)** as a county in which residents have a shortage of personal health services (HRSA, 2010). Along with access to health care providers and health services, the rural and underserved population lacks health insurance. Approximately 8.5 million people or about one in five of the uninsured live in rural areas (U.S. DHHS, n.d.). When the shortages of primary care providers and access to these providers are addressed, the health disparities and inequalities among residents living in rural and underserved areas will improve.

Figure 1.2



Source: Health Resources and Services Administration (2010) as cited in Rural Assistance Center (2011)

Figure 1.3



Source: Health Resources and Services Administration (2010) as cited in Rural Assistance Center (2011)

Table 1.1

State-by-State Community Health Data

State	Number of Residents Without Access to a Primary Care Physician	Annual Wasted Expenditures on Avoidable Emergency Room Visits	Estimated Number of Clinicians Required to Eliminate Need (at 1 clinician for every 2000 patients)*
Alabama	1,325,428	$319,400,854	663
Alaska	20,434	$32,732,965	10
Arizona	326,101	$311,438,714	163
Arkansas	636,207	$189,500,122	318
California	2,498,753	$1,829,345,794	1,249
Colorado	272,949	$238,246,230	136
Connecticut	102,615	$207,348,610	51
Delaware	46,820	$47,497,790	23
District of Columbia	80,836	$55,797,643	40
Florida	2,195,915	$1,061,420,739	1,098
Georgia	1,907,670	$537,867,735	954
Hawaii	1,345	$55,098,405	1
Idaho	277,867	$88,713,842	139
Illinois	632,687	$853,731,297	316
Indiana	809,064	$441,019,299	405
Iowa	339,747	$183,880,125	170
Kansas	351,249	$159,038,693	176
Kentucky	821,838	$353,798,163	411
Louisiana	1,630,978	$354,757,738	815
Maine	53,142	$105,902,573	27
Maryland	165,476	$320,407,972	83
Massachusetts	230,772	$401,458,842	115
Michigan	1,124,134	$726,928,960	562
Minnesota	454,920	$256,913,897	227
Mississippi	952,877	$252,769,055	476
Missouri	1,017,673	$429,712,468	509
Montana	150,308	$54,444,985	75
Nebraska	343,218	$94,243,689	172
Nevada	443,131	$112,928,929	222
New Hampshire	31,303	$79,046,610	16
New Jersey	557,531	$438,047,852	279
New Mexico	346,724	$132,027,370	173
New York	2,044,567	$1,126,031,176	1,022
North Carolina	1,664,904	$548,645,880	832

State	Number of Residents Without Access to a Primary Care Physician	Annual Wasted Expenditures on Avoidable Emergency Room Visits	Estimated Number of Clinicians Required to Eliminate Need (at 1 clinician for every 2000 patients)*
North Dakota	92,533	$41,491,015	46
Ohio	1,110,049	$932,659,694	555
Oklahoma	625,357	$208,230,028	313
Oregon	326,025	$179,035,367	163
Pennsylvania	1,103,118	$790,754,728	552
Rhode Island	23,916	$61,807,552	12
South Carolina	754,321	$265,008,761	377
South Dakota	147,866	$36,418,180	74
Tennessee	1,251,568	$476,285,058	626
Texas	3,956,574	$1,233,549,349	1,978
Utah	458,071	$152,152,368	229
Vermont	34,734	$38,015,757	17
Virginia	963,257	$452,375,606	482
Washington	299,269	$354,817,611	150
West Virginia	239,454	$180,480,840	120
Wisconsin	683,656	$272,179,576	342
Wyoming	119,181	$36,360,931	60
United States	36,048,131	$18,445,991,718	18,024

* State statistics do not include data from a category of health centers that does not receive federal funding, consequently underreporting the level of care delivered by health centers in many states. U.S. statistics include all health centers, including those that are not federally funded.

Source: National Association of Community Health Centers (2006)

Chapter II

Primary Care

In primary care, a partnership is encouraged between the health care clinician and patient through effective communication (American Academy of Family Physicians (AAFP), 2011). Universally, allopathic and osteopathic physicians in the disciplines of family practice, general internal medicine, and general pediatrics are referred to as primary care providers (Morehouse School of Medicine, 2011). Primary care is found to enhance the performance of health care systems and improve health outcomes by improving the quality of health care, improving continuity of care, and decreasing medical errors and medical costs (Phillips & Bazemore, 2010; Starfield, Shi, Grover, & Macinko, 2005). The AAFP has five definitions of primary care that if integrated together build a framework within which patients will have access to high quality, efficient and effective primary care services (AAFP, 2011). Their definitions of primary care "describe the care provided to the patient, the system of providing such care, the types of physicians whose role in the system is to provide primary care, and the role of other physicians, and non-physicians, in providing such care" (AAFP, 2011, ¶2). The AAFP states primary care "includes health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis and treatment of acute and chronic illnesses in a variety of health care settings (e.g., office, inpatient, critical care, long-term care, home care, day care, etc.)" (AAFP, 2011, ¶4).

Definition

The Institute of Medicine (IOM) issued reports in 1978 and in 1996 on the topic of primary care (Phillips & Bazemore, 2010). The IOM (1996) defined primary care as the

"provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Summary section, p. 1). It went on to state primary care is the "logical foundation of an effective health care system" (IOM, 1996, Summary section, p. 2). The updated report recognized three important perspectives for primary care: the patient and family, the community, and the integrated delivery system (IOM, 1996).

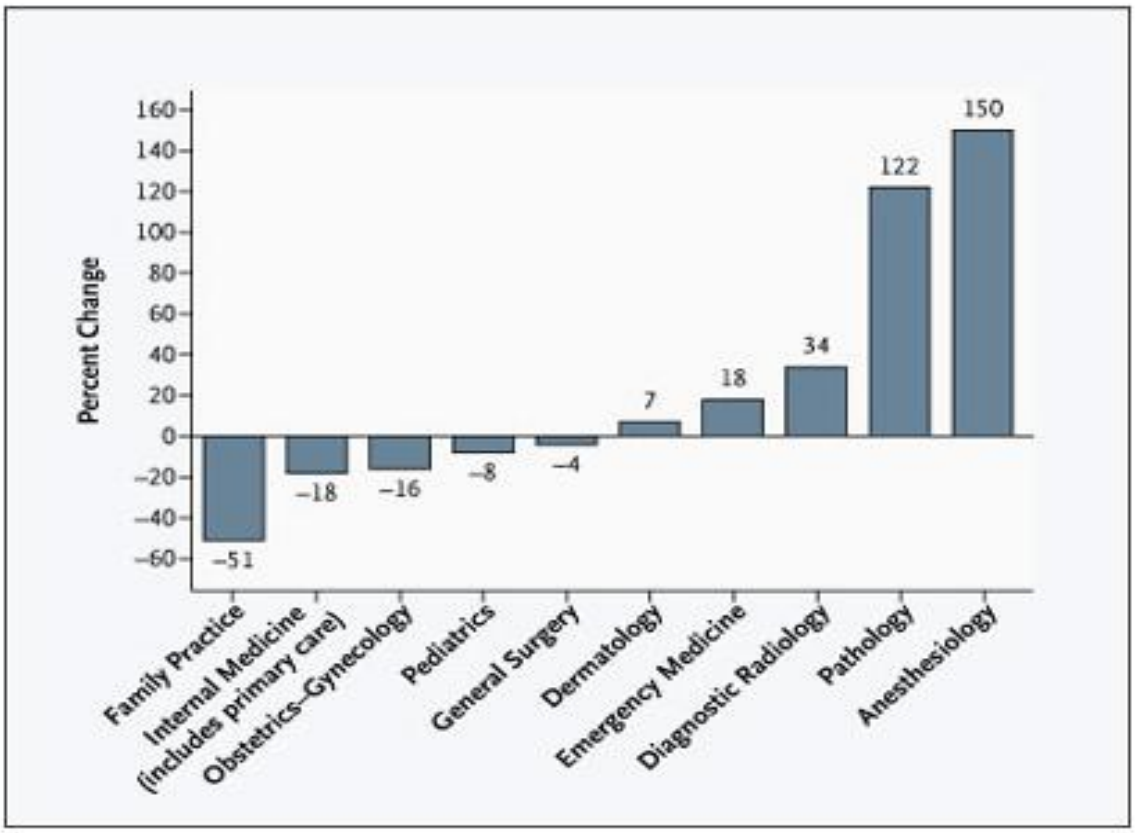
The WHO defines primary care as "person-centredness, comprehensiveness and integration, and continuity of care, with a regular point of entry into the health system, so that it becomes possible to build an enduring relationship of trust between people and their health-care providers" (WHO, 2008, p. 42). Both the IOM and WHO reflect the importance of primary care to be patient-centered, emphasizing the need for a partnership between the physician and patient.

Primary Care Workforce Decline

Primary care providers are necessary to increase health access and decrease health disparities in rural and underserved areas, but shortages of primary care providers exist (Nelson et al., 2007). Current trends in residency selection show medical residents are moving away from primary care and into subspecialty training (Figure 2.1). When comparing career choices of medical residents in 2009 vs. 2001, 20% more internal medicine residents are opting for subspecialty training and more general internists are becoming hospitalists (Rieselbach, Crouse, & Frohna, 2010). The AAFP states U.S. medical students' interests in family medicine is at a 10-year decline along with their interest in other primary care practices, such as pediatrics and internal medicine (as cited in Bein, 2009). These trends are exacerbating the shortage of primary care providers in rural and underserved areas. To solve the shortage of primary care providers, it

Figure 2.1

Trends in Residency Selection – 1998-2006



Source: Woo (2006)

is important to understand medical residents' decisions on choosing a career. Factors affecting medical residents' selection of career choice include:

- The enormous income gap between primary care and subspecialties (Weida, Phillips, & Bazemore, 2010),
- Suboptimal primary care graduate medical education (Rieselbach et al., 2010),
- Deficient reimbursement for primary care (Rieselbach et al., 2010),
- The problematic structure of primary care practice (Rieselbach et al., 2010), and
- Perception of an uncontrollable lifestyle (Dorsey, Jarjoura, & Rutecki, 2003).

These factors indicate a decline in the primary care workforce. As a result, the U.S. DHHS Health Resources and Services Administration and the U.S. Government Accountability Office report the supply of primary care physicians may be inadequate to meet the future needs of primary care in the U.S. (as cited in Kubal, Zweifler, Hughes, Reilly, & Newman, 2010).

Income Gap

There is an enormous income gap between primary care physicians and specialist physicians (Table 2.1) at a time when the debt for medical students is increasing. When assessing medical students' debt and career choices, the Association of American Medical Colleges' 2002 Medical School Graduation Questionnaire (GQ) shows that 83.5% of graduating students had an average debt of $86,870 (Rosenblatt & Holly, 2005). The debt levels influenced medical students' career choices and had an inverse relationship between the level of total educational debt and intention to enter primary care (Rosenblatt & Holly, 2005). Other studies assessing medical students' debt to careers choices show similar results (Colquitt, Zeh, Killian, & Cultice, 1996; Rosenthal, Marquette, & Diamond, 1996). Medical students with higher levels of debt are less likely to choose primary care residency programs. Also, the educational debt from 1999 to

Table 2.1

Physician Compensation Rates

		Actual		Adjusting for Inflation	
	2008 total median compensation	Percent change 2007-2008	Percent change 2004-2008	Percent change 2007-2008	Percent change 2004-2008
All primary care physicians	$186,044	2.04%	14.97%	-1.73%	0.87%
All specialist physicians	$339,738	2.19%	14.39%	-1.59%	0.36%

Source: Medical Group Management Association (2009) (as cited in MGMA in practice blog by Litzua, 2009)

2004 increased by 23.01% while the Consumer Price Index increased by only 9.24%, indicating that educational debt is increasing much faster than the rate of inflation (Rosenblatt & Holly, 2005).

Suboptimal Primary Care Graduate Medical Education

The Accreditation Council for Graduate Medical Education (ACGME) (2011) defines Graduate Medical Education (GME) as "simply the clinical training that follows graduation from medical school (undergraduate medical education); i.e., residency and fellowship" (What is graduate medical education? ¶1). Characteristics of a GME program are important factors in medical students' residency program choice. The factors influencing selection of a residency program include characteristics of the residency program, such as good house staff morale, academic reputation, a positive interview experience and the variety of clinical experiences. The results of a cross-sectional survey of fourth year medical students in internal medicine during the 1999 National Residency Matching Plan show that residency programs may want to improve upon several factors to make their program more attractive to medical students. Medical students identified programs with diverse clinical experiences as one of the most important factors in selecting a residency program (Aagaard et al., 2005). However, it is often difficult to provide primary care medical residents with diverse clinical experiences such as required ambulatory sites that lead to an optimal GME program to meet their training needs. Medical residents in primary care have described the outpatient departments of their training program as disorganized and chaotic environments, leading them to believe primary care is a frustrating and unrewarding career choice (Keirns & Bosk, 2008; Rieselbach et al., 2010). As Salsberg, Rockey, Rivers, Brotherton, & Jackson report, GME expansion has favored subspecialty careers since funding caps were put in place (as cited in Weida et al., 2010). These types of suboptimal environments

in GME programs are deterring medical students from pursing primary care careers and instead may lead them to choose subspecialty careers.

Deficient Reimbursement for Primary Care

Reimbursement for primary care is often based on the quantity of services provided instead of the quality of services provided leading to an inadequate reimbursement system (Bodenheimer, 2006). The reimbursement rates for primary care physicians are about three times lower for a thirty minute visit treating a patient with a chronic medical condition than a subspecialist who performs surgical, diagnostic, or imaging procedures for thirty minutes (Bodenheimer, 2006). In a national survey of randomly selected physicians, the majority (78.4%) indicated that Medicare reimbursements are inequitable (Federman, Woodward, & Keyhani, 2010). They believed some procedures were compensated too high while others were not compensated enough to cover costs (Federman et al., 2010). In addition, many physicians have been discouraged from accepting Medicaid patients at their practices due to low levels of reimbursement rates and a complex billing process (Granger & Young, 1999). The complexities of reimbursement rates are another factor contributing to a decline in the primary care workforce. As reform occurs in the reimbursement system, it is important to understand the current concerns of physicians so that the system is improved in a way that does not deter medical residents from choosing primary care careers and keep current physicians from accepting patients based on their health insurance.

Problematic Structure of Primary Care Practice

The structure of primary care practice can be considered problematic (Rieselbach et al., 2010). Primary care physicians work in ambulatory settings which are often disorganized and chaotic. In addition, the demands being placed on primary care physicians is a contributing factor

to the frustration felt in their practices. Fincher, Lewis, and Jackson (1994) describe the current practice environment of primary care which may turn students away from this potential career. To treat patients with chronic conditions and perform preventive services reliably and consistently, it is estimated that primary care physicians would need 10.6 hours per working day to provide the recommended care in addition to 7.4 hours per day to provide evidence-based preventive care to a panel of 2500 patients (Bodenheimer, 2006). This contributes to long waiting times and inadequate quality of care. Patients with a primary care provider who are unable to schedule timely appointments with their physicians and patients without a primary care provider often seek treatment at emergency departments. In addition, patients with chronic conditions often do not receive quality care as they do not understand what their physician has told them about their conditions (Bodenheimer, 2006).

Perception of an Uncontrollable Lifestyle

The perception of a controllable vs. uncontrollable lifestyle is related to career choices of medical students. Primary care careers have a perception of a poorly controllable lifestyle (Table 2.2). Studies have defined characteristics of a controllable lifestyle as "personal time free of practice requirements for leisure, family, and avocational pursuits and control of total weekly hours spent on professional responsibilities" (Dorsey et al., 2003, p. 1173). Controllable lifestyles are related to "the amount of time remaining for activities independent of medical practice and is a reflection both of total hours worked and number of nights on call" (Dorsey et al., 2003, p. 1173). In the study of 346 medical students in 9 U.S. medical schools, Schwartz et al. finds aspects of lifestyles (such as fewer number of practice work hours per week, allowed time for the pursuit of avocational activities, and a decreased number of call nights) all affect

Table 2.2

Characteristics of the Selected Specialties

Specialty	Lifestyle	Average Income, $ in Thousands	Average Work Hours per Week	Years of Graduate Medical Education Required
Anesthesiology	Controllable	225	61.0	4
Dermatology	Controllable	221	45.5	4
Emergency medicine	Controllable	183	46.0	4
Family practice	Uncontrollable	132	52.5	3
Internal medicine	Uncontrollable	158	57.0	3
Neurology	Controllable	172	55.5	4
Obstetrics and gynecology	Uncontrollable	224	61.0	4
Ophthalmology	Controllable	225	47.0	4
Orthopedic surgery	Uncontrollable	323	58.0	5
Otolaryngology	Controllable	242	53.5	5
Pathology	Controllable	202	45.5	4
Pediatrics	Uncontrollable	138	54.0	3
Psychiatry	Controllable	134	48.0	4
Radiology (diagnostic)	Controllable	263	58.0	4
Surgery (general)	Uncontrollable	238	60.0	5
Urology	Uncontrollable	245	60.5	5
Average for the above specialties	Not applicable	208	53.9	4

Source: Dorsey et al. (2003)

medical students' career choices (as cited in Dorsey et al., 2003). Dorsey et al. (2003), using analysis results from the National Resident Matching Program, the San Francisco Matching Program, and the America Urological Association Matching Program from 1996 to 2002, suggests income, work hours, and years of training showed statistically significant proportion of the variability in specialty preference for medical students using a log-linear model but none of these factors matched the level of explanatory power of controllable lifestyle.

Chapter III

Affect of Health Care Reform on Primary Care

On March 23, 2010, President Barack Obama signed into law the Patient Protection and Affordable Care Act (PPACA). The PPACA was followed by the Health Care and Education Reconciliation Act of 2010 which was signed into law on March 30, 2010 (Matzke & Ross, 2010). These health care reform initiatives were created to address three main goals: expand access to care, improve quality of care, and reduce the cost associated with care (Matzke & Ross, 2010). To meet these goals, the revitalization of primary care is essential. The PPACA focuses on many primary care needs such as addressing payment reform, improving primary care practices, increasing the primary care workforce, and strengthening the structure of primary care.

Address Payment Reform

- Section 5501 (PPACA, 2010). Primary care providers will see a payment increase of an additional 10% for services as long as primary care represents 60% or greater of the practice. Also, primary care providers practicing in HPSAs will see an additional 10% bonus payment in Medicare from 2011 through 2015.
- Section 1201 (PPACA, 2010). Primary care practices will see an increase in Medicaid payments for fee-for-service and managed care for services provided by primary care physicians to 100% of the Medicare payment rates for 2013 and 2014.

Improve Primary Care Practices

- Section 3502 (PPACA, 2010). Community health teams will be established to provide support to local primary care providers to coordinate and provide services included in a patient-centered medical home (PCMH) model. These community-based

interdisciplinary teams will support primary care practices within hospital service areas served by the practices.

Increase the Primary Care Workforce

- Section 5301 (PPACA, 2010). To help increase the primary care workforce and improve primary care training and enhancement, grants or contracts will be available to plan, develop, operate, or participate in an accredited professional training program in any primary care field (family medicine, general internal medicine, or general pediatrics). Grants or contracts will be approved for a demonstration program for training in new competencies, including PCMHs. Preference for the grants or contracts will be given to applicants for establishing or expanding primary care programs. Priority of the grants or contracts will be given to applicants that have a record of training the highest percentage of providers in primary care; propose collaborative projects between academic units of primary care; have a record of training individuals from rural backgrounds; propose innovative approaches; establish formal relationships with Federally Qualified Health Centers (FQHCs), rural health clinics, Area Health Education Centers (AHECs), or clinics in underserved areas; provide training in enhanced communication with patients, evidence-based practice, chronic disease management, preventive care, health information technology; and provide training in cultural competency and health literacy.
- Section 5403 (PPACA, 2010). Funding awards will be available for AHECs: (1) Infrastructure Development Award-to initiate health care workforce educational programs or continue to carry out comparable programs that are currently operating by planning, developing, and evaluating an AHEC program; (2) Point of Service

Maintenance and Enhancement Award-to maintain and improve effectiveness and capabilities of existing AHEC program and make modifications appropriate due to changes in demographics, needs of the population served, or similar issues affecting AHEC. Eligible entities shall use the grant funds for the following required activities:

- Develop and implement strategies to recruit individuals from underrepresented minority populations or from disadvantaged or rural backgrounds into health professions,
- Develop and implement strategies to provide community-based training and education to individuals seeking careers in health professions within underserved areas, with an emphasis on primary care,
- Prepare individuals to more effectively provide health services to underserved areas and health disparity populations through field placements or preceptorships in conjunction with community-based organizations, accredited primary care residency training programs, FQHCs, rural health clinics, public health departments, or other appropriate facilities,
- Conduct and participate in interdisciplinary training, and
- Deliver or facilitate continuing education and information dissemination programs for health care professionals with emphasis on individuals providing care in underserved areas or those with health disparities.

- Section 5405 (PPACA, 2010). The Primary Care Extension Program will be established to provide support and assist primary care providers to educate providers about preventive medicine, health promotion, chronic disease management, mental and behavioral health services, and evidence-based and evidence-informed therapies

and techniques. Primary Care Extension Agencies shall assist primary care providers to implement PCMHs and improve accessibility, quality, and efficiency of primary care services and develop and support primary care learning communities.

- Section 5508 (PPACA, 2010). Grants to increase teaching capacity will be available which may be used for expanding existing or establishing accredited primary care residency programs; preference will be given to applications that document an affiliation with an AHEC program.
- Section 5201 (PPACA, 2010). The Public Health Service Act will be amended so that practice commitment for loan repayment will be changed to 10 years including residency training in primary care or through when the loan is paid in full.

Strengthen the Structure of Primary Care

- Section 5503 (PPACA, 2010). Hospitals will experience a reduction of unused residency slots. However, this reduction does not apply to hospitals in rural areas with less than 250 acute care beds. Hospitals that receive increases in residency slots from the redistribution must show that at least 75% of the positions are in primary care or general surgery. Priorities in distribution of residency slots include whether the hospital has an accredited rural training track, if the hospital is located in a HPSA, and is located in a rural area.
- Section 3021 (PPACA, 2010). The Center for Medicare and Medicaid Innovation (CMI) will be established in the Centers for Medicare and Medicaid Services. The CMI will test payment and service delivery models where there is evidence that the model addresses a population which has deficits in care resulting in poor clinical outcomes or avoidable expenditures. Models to be tested include those that promote

broad payment and practice reform in primary care, including PCMHs that transition from fee-for-service and those that establish community-based health teams to support small-practice medical homes by assisting primary care providers.

The PPACA is only an initial step to improving primary care in the U.S. The PPACA begins to reform many critical areas that are contributing to the shortages of primary care providers, particularly in rural and underserved areas. By reforming reimbursement payments, the PPACA addresses the current differences in Medicaid and Medicare billing by enhancing payments for primary care. The PPACA also provides bonus Medicare payments for physicians in primary care who work in HPSAs. Although these bonus payments are only temporary, it is hoped that these reforms addressing reimbursement payments will begin to help decrease geographically-related disparities and disparities in resources between primary care practices who serve socially disadvantaged patients (Fiscella, 2011).

Under the health care reforms, FQHCs, which are the most important source of primary care for underserved patients, will continue to be a key source of primary care for the underserved population (Fiscella, 2011). These health reforms allocate funding heavily into FQHCs to increase the amount of patients served. Along with investing heavily into FQHCs, these health reforms aim to support residency training programs in primary care to increase the workforce in rural and underserved areas and strengthen the primary care structure. AHECs will see an increase in available funding for training primary care residents. Hospitals with accredited rural training tracks will see an increase in residency slots as long as they are training a majority of primary care residents and are located in HPSAs. The CMI will test health care models including PCMHs to determine if these models are improving health outcomes and decreasing health expenditures (Coburn, Lundbald, MacKinney, McBride, & Mueller, 2010). These health

reforms are all trying to improve primary care while decreasing the health disparities felt by the rural and underserved population.

The affects of the PPACA on the future of primary care is currently unknown. However, these reforms address critical areas in primary care which can have a positive impact on the primary care workforce decreasing inequalities and health disparities in rural and underserved areas. The benefit of the PPACA applies and is valuable even if the impacts are only modest.

Patient-Centered Medical Homes

The PPACA initiates the significant need for expanding the PCMHs model of health care delivery by financing and developing provisions to this model of care. The PCMHs model of care is "led by a primary care provider, with processes in place that make care better coordinated, integrated, accessible, safe, quality driven, culturally sensitive and linked to community services" (Bolin, Gamm, Vest, Edwardson, & Miller, 2011, p. 94). This model of care for patients is very similar to the definitions of primary care by both the IOM and the WHO. PCMHs are an approach to primary care that facilitates partnerships between the patient, the patient's physician, and the patient's family. It may be the basis for the future of primary care as it has proven to provide higher quality and more cost efficient care (Cassidy, 2010).

The federal government acknowledges the importance of PCMHs in improving primary care throughout the PPACA by enacting legislation to increase the prevalence of PCMHs' model of care in the U.S. health care system. Community-based interdisciplinary health teams will support primary care providers in developing the PCMHs model and establish a Primary Care Extension Program to help primary care providers implement the PCMHs model. The effectiveness of the PCMH model for improving health outcomes in rural and underserved areas is significant in the future of primary care practices as this model addresses the issues of access,

efficiency, quality, and sustainability in the delivery of health care (Bolin et al., 2011). As physicians in rural and underserved areas are challenged to provide basic health care services to the population in these areas, the PCMH model for improving health outcomes is regarded as a potential solution to decease the health disparities felt by the rural and underserved populations (Bolin et al., 2011). Policy makers feel this model can reduce and prevent chronic conditions, decrease unnecessary emergency department visits and avoid hospitalizations, all problems experienced more often by populations in rural and underserved areas (Bolin et al., 2011). By the health care reform legislation expanding reimbursement rates in Medicare and Medicaid, increasing workforce training programs and loan forgiveness incentives and establishing interdisciplinary health teams, primary care providers may have the necessary resources to successfully implement the PCMH model.

Chapter IV

Policy Implications

The passage of the PPACA attempts to address many factors affecting the future of primary care, often focusing the legislation on policy changes which benefit the rural and underserved populations. Creating legislation to support primary care by addressing payment reform, improving primary care practices, strengthening the primary care structure and increasing the primary care workforce will enhance primary care in the future. Issues related to medical students and medical residents' career choices including deficient reimbursement rates, suboptimal GME training programs, medical loan debt and the problematic structure of primary care must be addressed to increase the primary care workforce. Increasing health reform funding to residency training programs, specifically AHEC affiliated residency training programs, will solidify the commitment to improving health outcomes and health disparities felt by the population in rural and underserved areas. These policy reforms will enhance primary care, establish incentives to increase the primary care workforce, and award additional funding to residency training programs.

Residency Training Programs

In 1971, Congress developed the AHEC program to recruit, train and retain a health professions workforce committed to underserved populations (National AHEC Organization [NAO], 2008). Since the AHEC program has been established, over 49,000 health professionals have been trained at underserved clinical locations throughout the U.S. (NAO, 2009). The PPACA predominately seeks to increase the primary care workforce by increasing funds appropriated for AHEC training programs, with an emphasis on training medical residents in

primary care and in rural and underserved areas. The AHEC program will be a vital component to increasing the primary care workforce in rural and underserved areas as the PPACA enacts new legislation geared towards preparing physicians at community-based training sites including FQHCs, rural health clinics, and public health departments. Also, the additional funds appropriated to AHECs in the PPACA will attempt to prepare the primary care workforce to more effectively provide health services to underserved areas and health disparity populations (NAO, 2010). As primary care moves to PCMHs model, the PPACA offers AHECs the opportunity to increase the primary care workforce serving the rural and underserved areas using this new model of care.

Chapter V

Conclusions

Investing in primary care has proven to improve health outcomes, decrease health disparities and decrease health care spending. The U.S. is behind many industrialized countries in terms of key global health indicators. The health of the U.S. population living in rural and underserved areas is disproportionately negative when compared to those living in urban areas and those with access to health care. To improve the health of the nation, it is imperative for residency training programs to prepare medical residents for primary care careers, especially in rural and underserved areas. However, there is the problematic trend of cuts in primary training grants funded through Section 747 of Title VII of the Public Health Service Act, which provides funds to increase primary care providers (Bein, 2009). Policy changes are essential to increase the primary care workforce and the PPACA is the initial step to implement policy changes in favor of improving primary care and address the shortages of primary care providers in the U.S.

AHECs will be important stakeholders in improving the primary care workforce and addressing the shortages of primary care providers. As the PPACA calls for primary care to move into the PCMHs model to improve health outcomes of the rural and underserved populations, AHECs will be essential in training medical residents on this new model of care. By enacting community-based interdisciplinary health teams to support primary care practices, AHECs can improve the delivery of primary care in the future.

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